Remarks/Arguments:

Status of Claims

Claims 1, 11, 13 and 14 are in the application.

By way of this amendment, claim 13 has been canceled without prejudice, claim 11 has been amended and new claims 15-27 have been added.

Upon entry of this amendment, claims 1, 11 and 14-27 will be pending.

Summary of the Amendment

The claims have been amended to define specific embodiments of the present invention. New claims 15-21 each depend directly or indirectly on claim 1. New claims 22-27 correspond to new claims 16-21, respectively, but each of new claims 22-27 depend directly or indirectly on claim 11.

New claim 15 refers to specific solid supports that can be used in embodiments of the present invention. Support for new claim 15 is found throughout the specification, particularly pages 5 and 21. No new matter has been added.

New claims 16 and 17 and claims 22 and 23 depend on claims 1 and 11, respectively, and further limit those claims by referring to a subset of the epitope detectors listed in the independent claims. Support for new claims 16, 17, 22 and 23 is found throughout the specification and claims as originally filed. No new matter has been added.

New claims 18 and 24 depend on claims 1 and 11, respectively, and further limit those claims by referring to the means by which the oligonucleotide is linked to the monclonal antibody, antibody fragment or CDR. Support for new claims 18 and 24 is found throughout the specification, particularly page 9. No new matter has been added.

New claims 19 and 25 depend on claims 1 and 11, respectively, and further limit those claims by defining the oligonculeotide as a specific type of nucleic aid molecule. Support for new claims 19 and 25 is found throughout the specification, particularly page 9. No new matter has been added.

New claims 20 and 26 depend on claims 1 and 11, respectively, and further limit those claims by defining the oligonculeotide as comprising one of a listed set of RNA promoters. Support for

new claims 20 and 26 is found throughout the specification, particularly pages 9 and 10. No new matter has been added.

New claims 21 and 27 depend on claims 1 and 11, respectively, and further limit those claims by defining the type of fluorescent dye used. Support for new claims 21 and 27 is found throughout the specification, particularly page 11. No new matter has been added.

Double Patenting Rejections

Claims 1, 11, 13 and 14 have been provisionally rejected under the judicially created doctrine of obvious-type double patenting over claims in co-pending applications 09/624,946 and 09/977,716. Applicants note that this rejection is provisional. Applicants will promptly provide a terminally disclaimer if appropriate and as necessary upon indication of allowability of claims in the instant case.

Rejections under 35 USC §103

Eberwine and Sano

Claim 1 is rejected under 35 USC §103 in view of Eberwine and Sano. It is asserted that Eberwine discloses quantification of epitopes using immuno-RNA amplification, Sano discloses use of fluorescence to detect products of immuno-PCR and therefore it would be obvious to one skilled in the art to combine the teachings of Eberwine and Sano to provide a method of quantifying epitopes using immuno-RNA amplification whereby the amplified RNA product is quantified using fluorescent label. Applicants respectfully disagree.

Eberwine neither teaches nor suggests quantification of epitopes using fluoresence.

Sano specifically relates to detection methods, not quantification methods. Those skilled in the art would not combine the teachings of Sano with quantification assays to provide a quantification assay using fluoresence. Moreover, Sano does not teach or suggest any means to achieve quantification using fluorescence. Quantification is not discussed by Sano and no such teaching or suggestion is provided. Sano does not refer to quantification of emitted fluoresence as correlating to epitopes present in the samples of Sano.

One skilled in the art would not combine the references. Sano does not employ fluoresence for the purposes it is used in the instant invention and Sano does not teach quantification. In fact, Sano does not teach or suggest quantification. Even if combined, Sano teaches at most that the

product in Eberwine could be detected and nothing in Sano suggests the technology in Sano could be used to quantify rather than simply detect the presence of epitopes in a sample. The combination of references do not yield the instant invention.

Applicants respectfully request that the rejection of claim 1 under 35 USC §103 in view of Eberwine and Sano be withdrawn.

Eberwine and Zeytingoglu

Claims 11, 13 and 14 are rejected under 35 USC §103 in view of Eberwine and Zeytingoglu. It is asserted that Eberwine discloses detection of epitopes using immuno-RNA amplification, Zeytingoglu discloses immuno-amplification detect products of antibody-antigen binding including "two step" amplification technology, and therefore it would be obvious to one skilled in the art to combine the teachings of Eberwine and Zeytingoglu to provide a method of detecting epitopes using immuno-RNA amplification whereby the amplified RNA product is further amplified prior to detection using fluorescent label. Applicants respectfully disagree.

Eberwine neither teaches nor suggests detection of epitopes using RNA amplification in combination with reverse transcriptase or replicase reactions and fluoresence.

Zeytingoglu refers to immunodetection methods and optionally provides for amplification including "two steps, three steps, PAP and APAAP" without further elaboration of what is meant by two steps and three steps. There is no disclosure anywhere in Zeytingoglu of doing RNA amplification in combination with reverse transcriptase or replicase reactions. The disclosure describes only single PCR amplificiation. PAP and APAAP refer to double antibody technologies, - not dual reactions involving nucleic acids. The only multi-step processes disclosed in Zeytingoflu refer to different steps used for linking the oligonucleotide to be amplified to the antibody that binds to the selected epitope. These methods are completely unrelated steps at issue in the claimed invention.

The combination of Eberwine and Zeytingoglu do not yield the present invention. Nowhere is there the teaching or suggestion of RNA amplification in combination with reverse transcriptase or replicase reactions. Zeytingoglu does not address the deficiency of Eberwine. The combination of references do not yield the instant invention.

Applicants respectfully request that the rejection of claims 11, 13 and 14 under 35 USC §103 in view of Eberwine and Sano as applied to claims 11 and 14 be withdrawn.

Conclusion

Applicants respectfully urge that claims 1, 11, and 14-27 be allowed at this time.

Respectfully submitted,

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